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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,970	11/21/2003	Chuck Cannon	660023.405C1	4416

25315 7590 11/14/2005

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EXAMINER

CHANG, VICTOR S

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 11/14/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/718,970

Applicant(s)

CANNON ET AL.

Examiner

Victor S. Chang

Art Unit

1771

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 8-16 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>11/21/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Group I, Species A in the reply filed on 9/22/2005 is acknowledged. In summary, claims 1-7 are elected, and claims 8-16 are withdrawn from further consideration. The traversal is on the ground(s) that "The claimed method is limited to the production of the claimed apparatus." (Remarks, page 2). This is not found persuasive because these inventions are distinct, and the product as claimed can be made by another and materially different process such as by injection molding (see Office action mailed 7/20/2005). Further, a separate and different search would be required for the method claims.

The requirement is still deemed proper and is therefore made FINAL.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 3, 4, 6 and 7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

More particularly, the term "approximately" in claims 3, 4, 6 and 7 renders the claim indefinite. The term "approximately" is not defined by the claim, the specification does not provide a standard for ascertaining the scope or range of "approximately", and

one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-4, 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Finley (US 6054207) in view of Laver (US 5516472).

Finley's invention is directed to structural components comprising a foamed thermoplastic with an exterior capping layer, which is structurally strong, thermally stable, shrink resistant, and can be used in virtually any application where wooden components are used (abstract). The structural foamed composite comprises a thermoplastic polymer and a wood fiber. A preferred source of wood fiber is the wood fiber product or by-product of sawing or milling soft woods (column 2, lines 39-52). The amount of the wood fiber materials is commonly less than 25 wt % of the composite product (column 4, lines 29-32). Suitable thermoplastic resins include acrylonitrile butadiene styrene (ABS), styrene acrylonitrile (SAN) polymers, and polymeric blends or alloys, etc. (column 5, lines 15-66). Suitable blowing agents include chemical blowing agents such as organic or inorganic bicarbonates or oxylates, azo-chemicals, hydroxides, and amine nitrates, etc. (column 8, lines 55-58).

For claims 1 and 2, Finley lacks express teachings of the amount of SAN, ABS and foaming agent, and the use and amount of lubricant. However, regarding the amount of SAN and ABS, it is noted that Finley does teach that the use of polymeric blends or alloys improves the physical properties, such as the heat resistance, chemical resistance, surface hardness, processability, rigidity and strength (column 6, lines 25-59). As such, in the absence of unexpected results, since both Finley and instant invention are structural components, and the utility as such dictates there would be similar physical properties, it is the Examiner's position that a suitable amount of SAN and ABS in the thermoplastic composite material is an obvious optimization to one skilled in the art of polymer blends. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Similarly, in the absence unexpected results, the Examiner asserts that the amount of foaming agent is also an obvious optimization to one of ordinary skill in the art to foamed composite for wood-like products, as taught by Finley. Finally, regarding the use and amount of lubricant, it is noted that Laver's invention is also directed to a thermoplastic wood composite (abstract), and Laver expressly teaches that lubricants can be used to "plasticize" the mixture in the extruder as a process aid. Examples of typical lubricants include internal lubricant zinc stearate, etc. (column 6, lines 57-59; column 18, lines 18-20). As such, in the absence of unexpected results, it would have been obvious to one of ordinary skill in the art to also include a lubricant in Finley's composite mixture, motivated by the desire to improve the processability of the mixture.

For claim 3, Finley expressly shows in Examples that wood fibers of 50 mesh is used for making the composite.

For claim 4, while Finley is silent about the range of fiber mesh, Finley does expressly teach that suitable fibers are 0.1 to 5 mm in length with an aspect ratio between 2 and 7 (column 3, lines 61-62), and the wood fiber sources of the invention can be blended regardless of particle size and used to make the composite (column 4, lines 13-14). As such, Finley's teachings clearly encompass the fiber mesh as claimed.

For claim 5, Laver expressly teaches that examples of typical lubricants include internal lubricant zinc stearate, etc. as set forth above, and the Examiner takes Official notice that magnesium stearate is a known equivalent lubricant. It should be noted that the selection and substitution of a known equivalent material based on its suitability for its intended use supported a *prima facie* obviousness determination. See MPEP § 2144.07.

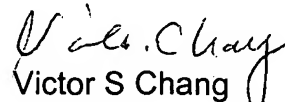
For claims 6 and 7, regarding the physical properties of the thermoplastic wood fiber composites, since both Finley and instant invention are structural components, made by the same process, for the same application, and the utility as such dictates there would be similar physical properties, it is the Examiner's position that suitable physical properties in these claims are obvious optimizations to one skilled in the art of the thermoplastic wood fiber composite materials.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S. Chang whose telephone number is 571-272-1474. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H. Morris can be reached on 571-272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Victor S Chang
Examiner
Art Unit 1771

11/8/2005